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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
09 732,123	12 07 2000	Moris M. Amon	10242	9609

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ExxonMobil Chemical Company
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EXAMINER

VO. HAI

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 01 31 2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/732.123

Applicant(s)

AMON, MORIS M.

Examiner

Hai Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-6, drawn to a porous film, classified in class 428, subclass 305.5.
 - II. Claims 7-11, drawn to a method for plasma treating a porous film to make the pore space thereof more hydrophilic, classified in class 156, subclass various.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by another and materially different process such as by chemical or corona treatment.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Ricky James on 01/11/02 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-6. Affirmation of this election must be made by applicant in replying to this Office action. Claims 7-11 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

5. The specification is objected to because of the following reasons. The status of Patent Applications Serial No. 08/686,287 (page 3, line 26) and Serial No. 09/079,807 (page 7, line 3) need to be updated. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 4 and 5 recite the limitation "the matrix material" in line 2. There is insufficient antecedent basis for this limitation in each claim.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yagi et al (US 5,650,451). Yagi discloses a plasma treated biaxially oriented film of high

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molecular weight polyethylene having a void content of 20 to 70%, likewise a pore accessibility for water of 80 to 30% and a contact angle of the film surface to the water drop is not more than 90 degrees (column 14, lines 47-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have altered the range of the void content and the range of the contact angle of the film surface to the water drop, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. It would have been obvious to the skilled artisan to have optimized the range of the void content and the range of the contact angle of the film surface to the water drop motivated by the desire to obtain a porous film excellent in affinity for water.

With regard to claims 2 and 3, Yagi discloses the biaxially oriented film being used each singly or in lamination with the films of various kinds of resins (column 15, lines 46-49).

With regard to claim 5, Yagi is silent as to isotactic polypropylene and amount of isotactic polypropylene in the matrix material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used isotactic polypropylene as the polymer of the film because it is known in the film art, isotactic polypropylene is a typical form of polyolefin that is used for producing an article with high impart strength and a microporous film. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have altered the concentration range of the isotactic polypropylene, since it has been held

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that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. It would have been obvious to the skilled artisan to have optimized the concentration range of the isotactic polypropylene motivated by the desire to obtain a porous film having high impact resistance.

10. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chung (US 5,837,365). Chung discloses a hydrophilic polypropylene membrane in the form of a porous film having OH groups on its surfaces, including pore surfaces (column 4, lines 12-19). Chung discloses hydrophilic polypropylene membrane having the contact angle of 77 degrees (example 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have altered the range of the contact angle of the film surface to the water drop, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. It would have been obvious to the skilled artisan to have optimized the range of the contact angle of the film surface to the water drop motivated by the desire to obtain a porous film excellent in affinity for water. Chung does not disclose the pore volume fraction as well as the pore accessibility for water. Since the film of Chung is made of the same material and structurally the same (porosity and hydrophilicity) as the film of the present invention. It is the examiner's position that the film of Chung would inherently possess the pore volume fraction and the pore accessibility for water within the range by the claimed invention. Chung is silent as

to a plasma treatment to prepare the functionalized polypropylene. It is the examiner's position that the article of Chung is identical to or only slightly different than the claimed article prepared by the method of the claim, because both articles use the same materials, having structural similarity (porosity and hydrophilicity). Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. **The patentability of a product does not depend on its method of production.** If the product in the product-by-process claim is the same as or an obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289,291 (Fed. Cir. 1983). The Chung reference strongly suggested the claimed subject matter. It is noted that if the applicant intends to rely on Examples in the specification or in a submitted Declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with Chung.

With regard to claim 3, Chung discloses a membrane comprising a surface layer and a porous support layer (column 6, lines 29-30).

With regard to claim 5, Chung is silent as to isotactic polypropylene and amount of isotactic polypropylene in the matrix material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used

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isotactic polypropylene as the polymer of the film because it is known in the film art, isotactic polypropylene is a typical form of polyolefin that is used for producing an article with high impact strength and a microporous film. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have altered the concentration range of the isotactic polypropylene, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. It would have been obvious to the skilled artisan to have optimized the concentration range of the isotactic polypropylene motivated by the desire to obtain a porous film having high impact resistance.

11. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amon (US 6,183,856) in view of Arbit (US 4,445,991). Amon discloses a polymeric film having porous structure and made of polypropylene as recited by the claims. Since the film of Amon is made of the same material and structurally the same (porosity and hydrophilicity) as the film of the present invention. It is the examiner's position that the film of Amon would inherently possess the contact angle, the pore volume fraction and the pore accessibility for water within the range by the claimed invention. Amon is silent as to the plasma treatment of the pore surface of the film. Arbit teaches a plasma treatment for enhancing wettability of the polymer surface. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the pore surface of the film with plasma

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treatment motivated by the desire to obtain a porous film having excellent affinity for water.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (703) 605-4426. The examiner can normally be reached on Monday to Friday, 8:30 to 5:00 (EAST). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (703) 308-1261. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

HV
January 22, 2002


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